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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,034	05/23/2000	James K. Guenter	M10 26373 US	3363

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EXAMINER
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VY, HUNG T

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/577,034

Applicant(s)

GUENTER ET AL.

Examiner

Hung T Vy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

1. In response to applicant's amendment filed on 01/05/2003, claims 1-22 are pending in this application.

### **Claim Rejections - 35 USC § 112**

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 14, 15-19 and 22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and 15, the phrase “ a polarization medium positioned in proximal relation to the laser source element for polarizing the light output in third polarization state that selects and attenuates each of the at least two polarization states equally or substantially equally ” renders the claims indefinite because the claims recite only a laser source element and a polarization medium without the recitation the structure of device and any polarization configuration in order to perform how the light output in a third polarization state that selects and attenuates each of the at least two polarization states equally or substantially equally and perform the polarization control the optical energy source. The sole recitation of a laser source element and a polarization medium

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in the claim fail to conform any clear polarization control optical energy source to further limit the invention as shown in figures 3a-4c.

Claims 2-19 and 22 depend from rejected claims 1 and 15 thereby render these dependent claims indefinite.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1,2,4-7,10-12, and15-19 are rejected under 35 U. S. C. § 102 (e) as being anticipated by Davis et al, U.S. patent No. 6,069,905 or by Cohen et al., U.S. patent No. 6,302,596 or by Scott et al., U.S. Patent No. 6,567,435.

5. Regarding to claims 1, 5, 10, and 21, Davis et al. discloses a polarization controlled optical energy source, comprising:

A laser source (10) that produces a light output that has one and/or both of at least two polarization states (see Fig 3 and see column 4, line 45-64); and polarization medium (37) positioned in proximal relation to the laser source element (See column 5, line 1-32). It is inherent that at an incidence angle of the light to medium then the

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polarization medium is selecting and attenuate each of the at least two polarization states equally or substantially equally and provide linear polarization along an axis that is at about 45 degrees to both distinct polarization states (see fig. 1,3).

Regarding claims 2,6 and 7, Davis et al, discloses the source, wherein said laser source element is disposed within a component package having an emission aperture formed therein. (See column 3, lines 13, and column 3, lines 2 and fig 3).

Regarding to claim 4, Davis et al, discloses the source, wherein said laser source element (10) has multiple distinct polarization states oriented with respect to one another at angular intervals. (See fig 13).

Regarding to claim 11, Davis et al. discloses the source, wherein said polarization medium 39 is affixed to the component package spanning the emission aperture (See Fig 7).

Regarding to claim 12, Davis et al. discloses the source, wherein said polarization medium (37) is disposed within the component package between the vertical cavity surface emitting laser (10) and the emission aperture. (See column 5, line 1-32 and fig 7).

With respect to claims 15-19 and 22, the methods for VCSEL polarization control are considered as product by process steps.

6. Regarding to claims 1, 5, 10, and 21, Cohen et al. discloses a polarization controlled optical energy source, comprising: a laser source (134) that produces a light output that has one and/or both of at least two polarization states (see Fig 2 and all the laser source have two polarization as photons in there dimensional space with at least

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two polarization states as p and s); and polarization medium (140) positioned in proximal relation to the laser source element (See fig. 2). It is inherent that at an incidence angle of the light to medium then the polarization medium is selecting and attenuate each of the at least two polarization states equally or substantially equally and provide linear polarization along an axis that is at about 45 degrees to both distinct polarization states (see fig. 2).

7. Regarding to claims 1, 5, 10, and 21, Scott et al. discloses a polarization controlled optical energy source, comprising: a laser source (36) that produces a light output that has one and/or both of at least two polarization states (see Fig 4 and all the laser source have two polarization as photons in there dimensional space with at least two polarization states as p and s); and polarization medium (42) positioned in proximal relation to the laser source element (See fig. 4, 5,6 or 9). It is inherent that at an incidence angle of the light to medium then the polarization medium is selecting and attenuate each of the at least two polarization states equally or substantially equally and provide linear polarization along an axis that is at about 45 degrees to both distinct polarization states (see fig. 2,4, 5,6 or 9).

### **Claim Rejections - 35 U.S.C. § 103**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

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art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 8, 9, 13, 14, and 20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. patent No. Davis et al, U.S. No. 6,069,905, Cohen et al., U.S. patent No. 6,302,596 or by Scott et al., U.S. Patent No. 6,567,435 in view of Jewell et al, U.S. Patent No. 5,331,654.

Regarding claims 3, 8, 9, 13, 14, and 20, Davis et al. or Cohen et al. or Scott et al. disclose a polarization controlled optical energy source with a package base, a vertical cavity surface emitting laser device, package cover, and polarization medium but Davis et al. or Cohen et al. or Scott et al. do not disclose polarization medium (37) provides linear polarization, laser source element has two distinct polarization states that are normal to one another, polarization medium is formed from a sheet polarization material. However, Jewell et al. disclose polarization medium 68 provides linear polarization (See column 7, line 19-27), the source, wherein said polarization medium provides linear polarization (See column 7, line 19-27), laser source element has two distinct polarization states that are normal to one another (See column 4, line 33 – 36 and Fig 10), and polarization medium is formed from a sheet polarization material. See column 4, line 39 – 55.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Davis et al. to have linear polarization and a sheet polarization material that of Jewell et al., because those skilled

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in the art will recognize that such modification and variations can be made without departing from the spirit of, but further increasing the performance of, the invention of Jewell et al.

### **Response to Arguments**

10. Applicant's arguments filed on 01/05/2004 have been fully considered and they are not persuasive. Applicant made the following arguments:

- a. "There is no requirement under 35 U.S.C 112 second paragraph, that requires applicant to limit their claims to illustrative embodiments shown and described in the specification" page 9 second full paragraph.
- b. "Nothing in Devis et al. suggests a polarization medium positioned in proximal relation to the laser source element for polarizing the light output in the third polarization state that selects and attenuates each of the at least two polarization states equally or substantially equally..... Thus, Davis et al. appear to minimize any polarization effects on the reflected and transmitted light. in addition, Applicants would like to point out in a third polarization selectivity in Davis et al. does not mean or suggest polarizing the light output in a third polarization state that selects and attenuates each of the at least two polarization states equally or substantially equally, as recited in claim 1. Rather, in David et al. polarization selectivity appears to mean selecting one polarization state over



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another " page 10, third paragraph and page 11, first paragraph and second paragraph.

c. "there is no indication in Davis et al. that tilted window actually polarizes the light output of the laser source in a third polarization state that selects and attenuates each of the at least two polarization states of the laser equally or substantially, as recited in claim 1" page 12, second paragraph.

In response to Applicant's argument **a** above, applicant fails to fix the problem in the claims instead of just pointed out the definition as recited in specification and the argument. The applicant's argument is not persuasive and the argument is not supported by any claims because the claims recite only a laser source element and a polarization medium positioned in proximal relation to the laser source element without recite how the device performs the function that the output in a third polarization state that selects and attenuates each of the at least two polarization states equally or substantially equally. The claim fails to comply with 35 U.S.C. 112, 2<sup>nd</sup> paragraph with the sole recitation of laser source and a polarization medium.

In response to Applicant's argument **b** above, the applicant's argument is not persuasive because Davis et al. recites the laser source that produce a light output that has at least two polarization state (see column 4, line 47-64) and polarization medium position in proximal relation to the laser element. Davis et al. discloses the tilted window has a metallic coating for partially reflection but window is still polarization and transmits the light (See fig. 5 as transmitted light from 0 to 100%). It does not mean that the window is not polarization because Davis et al wants some light comeback to the

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light detector. On Fig. 5 shows that depends on the angle of the window from  $0^{\circ}$  to  $90^{\circ}$ , the light transmits through the widow (polarization medium) from 0 % to 100% so depend on angle of window, the light output in a third polarization state that selects and attenuates each of the at least two polarization states equally (see column 4, line 47-67 and column 5, line 1-31). Applicant's argument is not corrected.

In response to Applicant's argument c above, the applicant's argument is not persuasive because examiner has explained on response to applicant's argument b above.

Like Davis et al., Cohen et al. and Scott et al. disclose all limitation of claim.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vy whose telephone number is (571) 272-1954.

The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If

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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (571) 272-1954. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



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Hung T. Vy

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February 20, 2004